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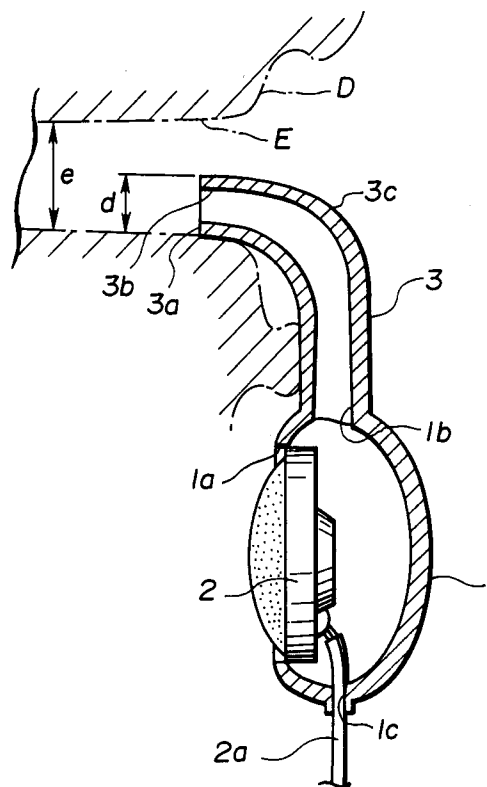
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**22.07.92 Bulletin 92/30**(71) Applicant: **SONY CORPORATION****7-35, Kitashinagawa 6-chome Shinagawa-ku  
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**et al**  
**J.A. KEMP & CO., 14 South Square, Grays Inn**  
**London WC1R 5LX(GB)**(54) **Electro-acoustic transducer and sound reproducing system.**

(57) An electro-acoustic transducer comprising an electro-acoustic transducer accommodated in a cabinet, and a sound guide tube for conducting the sound from the electro-acoustic transducer unit out of said cabinet, said sound guide tube being of a lesser diameter than the external acoustic miatus to allow at least the sound radiating end of the sound guide tube to be introduced into the external auditory miatus.

**FIG.1****EP 0 421 681 A3**



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## EUROPEAN SEARCH REPORT

Application Number

EP 90 31 0624

| DOCUMENTS CONSIDERED TO BE RELEVANT   |   |  |   |
|---|---|--|---|
| Category  | Citation of document with indication, where appropriate, of relevant passages   | Relevant to claim                              | CLASSIFICATION OF THE APPLICATION (Int. Cl.5)   |
| A   | FR-A-2 604 589 (TEMCO)<br>* Page 1, lines 5-12; page 3, lines 21-26; page 5, line 14 - page 6, line 29 *                    | 1-3  | H 04 R 1/10<br>H 04 R 1/28                      |
| A   | GB-A-2 078 057 (SONY)<br>* Page 1, lines 28-35, 47-91 *   | 1, 4-6   |   |
| A   | PATENT ABSTRACTS OF JAPAN, vol. 9, no. 295 (E-360)[2018], 21st November 1985; & JP-A-60 134 599 (FUJIO SHIINA) 17-07-1985   | 1, 4, 7  |   |
| A   | FR-A-2 599 922 (DODIC)<br>* Page 1, line 29 - page 2, line 2; page 4, line 37 - page 5, line 12 *                           | 1, 4, 8, 9                                     |   |
| A   | EP-A-0 314 419 (SONY)<br>* Column 1, lines 2-5; column 2, lines 32-57; column 5, lines 24-36 *                              | 1, 10  |   |
| A   | US-A-3 995 113 (TANI)<br>* Column 2, lines 31-40; column 4, line 14 - column 5, line 40 *                                   | 1, 11  | TECHNICAL FIELDS SEARCHED (Int. Cl.5)<br>H 04 R |
| A   | EP-A-0 270 857 (EVER CLEAN)<br>* Column 1, lines 1-5; column 4, lines 29-51 *   | 12   |   |
| A   | US-A-4 682 363 (GOLDFARB et al.)<br>* Column 2, lines 24-41; column 3, line 25 - column 4, line 6 *                         | 12   |   |
| A   | US-A-4 383 134 (VON RECKLINGHAUSEN)<br>* Column 1, lines 5-7; column 2, lines 23-28; column 5, line 42 - column 6, line 9 * | 12-15  |   |
| The present search report has been drawn up for all claims  |   |  |   |
| Place of search<br>THE HAGUE  |   | Date of completion of the search<br>29-04-1992 | Examiner<br>ZANTI P.V.L.                        |
| <b>CATEGORY OF CITED DOCUMENTS</b><br>X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document<br>T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>& : member of the same patent family, corresponding document |   |  |   |



### CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ All claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claims:
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

### LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions, namely:

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- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☐ None of the further search fees has been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



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EP 90 31 0624 -B-

#### LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims 1-11: Electro-acoustic transducer accommodated in a cabinet; a sound guide tube, being of lesser diameter than the external acoustic miatus.
2. Claims 12-15: The electro-acoustic transducer; the sound guide tube; and a sound reproducing apparatus.